

U.S. CONVENTIONAL UTILITY PATENT
APPLICATION
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Title of Invention: Trash Bag Support and Liner

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DESCRIPTION

This application claims priority from prior pending provisional application Serial Number 60/261,378 filed on January 12, 2001, with the same title, incorporated herein by reference.

BACKGROUND OF THE INVENTION

Field of the Invention

This invention relates generally to trash bags, and more specifically to removable flexible liners for supporting trash bags in the open, upright position.

Related Art

There have been many versions of trash bag supports and liners. For example:

U.S. Patent No. 3,936,08 (Alexander) discloses a debris collection receptacle with an open cylindrical base with a handle on one side, and semi-cylindrical scraper tray extending upwardly from the other side. A plastic garbage bag is carried outside of the cylindrical base and retained on it by frictional engagement between the handle and base and tray and base.

U.S. Patent No. 4,037,778 (Boyle) discloses a smooth liner sheet having interconnected vertical panels that are freely swingable toward and away from one another.

U.S. Patent No. 4,749,011 (Rylander) discloses a flexible bag holder with a body of normally flat planar configuration, but enough memory characteristics for springing radially outwardly to form one cylindrical configuration, and for returning to normal flat planar configuration.

U.S. Patent No. 5,129,609 (Tobin) discloses a flexible bag support with a substantially rigid, flat back panel, and two foldably connected side panel members.

U.S. Design Patent No. 361,185 (Seiler, et al.) discloses an ornamental design for a bag support insert which is a series of alternating, vertically-foldable panels which also have a horizontal fold line near their tops.

Still there is a need for a very simple and inexpensive removable trash bag support and liner. This invention addresses that need.

SUMMARY OF THE INVENTION

The present invention is a simple and inexpensive removable trash bag support and liner. The liner of the present invention is a single, generally rectangular piece of plastic, preferably about 1/16" thick, about 32" high, and with a width (which becomes the perimeter) about 68". The corners of the rectangular plastic piece may optionally be rounded for comfort and safety during handling. Also, the liner may have several hand holes near its upper and/or lower edges to facilitate lifting it out of the bag when the bag is full of debris. Also, the liner has a temporary locking mechanism for holding it in a set cylindrical position. When the lock is engaged, the bag liner may be set in a self-standing manner on either its top or bottom edge, and an empty garbage bag easily placed over the liner. Then, when the liner and bag are inverted to the upright position, releasing the locking mechanism lets the liner automatically unroll and expand to fit tightly within the plastic bag. Preferably, the locking mechanism is a combination of a tab near an outside edge of the liner, and a cooperating open slit near the center of the liner, for example, about 41" toward the center and away from the tab. This way, a simple and inexpensive removable trash bag support and liner is provided by the present invention.

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BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1A is a top, plan view of one embodiment of the liner of the present invention laying flat in a fully opened position.

Figure 1B is a side view of the embodiment depicted in Figure 1A.

Figure 2A is a top, plan view of the embodiment depicted in Figure 1, but in the upright, fully closed and temporarily locked, position.

Figure 2B is a side elevational view of the position depicted in Figure 2A.

Figure 3A is a side, perspective view of the embodiment depicted in Figures 1, 2A and 2B, but in the inverted, upside-down, partially-opened position with a garbage bag placed over it.

Figure 3B is a side, perspective view of the embodiment depicted in Figure 3A, but in the re-inverted, upright fully opened position with the garbage bag frictionally held on the liner's outside surface.

DETAILED DESCRIPTION OF THE INVENTION

Referring to the Figures, there is depicted one, but not the only, embodiment 10 of the trash bag support and liner of the present invention. Liner 10 is a single, generally rectangular piece of plastic, preferably about 1/16" thick. Liner 10 preferably has a height (H) of about 32", and a width (W) (which becomes the perimeter when the liner is rolled up) of about 68". The corners of the generally rectangular plastic piece may optionally be rounded for comfort and safety during

handling. Preferably, liner 10 is manufactured so that both side edges have a slight built-in curl as depicted in Figure 1B. This way, the side edges will tend to curl inwardly, and wrap around themselves when they are rolled up to be placed inside the bag. This prevents them from forming a "tear drop" shape, or a "T" intersection shape which interfere when they are attempted to be rolled up.

Preferably, liner 10 has several hand holes 12, 12' near its upper edge (T) to facilitate lifting the liner out of the bag when the bag is full of debris. Also, liner 10 may have several hand holes 13, 13' near its lower edge (B). This way, the liner may be placed in the bag while standing on either its upper (T) or lower (B) edge. Typically, the hand holes are about 1 1/4" high and about 4" wide, and are located with their top edge being about 1 1/2" in from the upper and lower edges of liner 10.

Liner 10 has temporary locking mechanism 14, 14' for holding it in a set cylindrical position. Preferably, the locking mechanism has tab 14 which pivots within partially cut-out section 16, and cooperating slot 14' created by completely cut-out section 16'. Tab 14 is adapted to fit snugly within slot 14'. This way, when locking mechanism 14, 14' is engaged, liner 10 is temporarily held in a partially-opened, rolled-up position, as depicted in Figures 2A & 2B.

To use the present invention, liner 10, with locking mechanism 14, 14' engaged, and therefore when held in the partially-opened, rolled-up position. Then, a trash bag 18 is placed over liner 10, with the open top 20 of trash bag 18 being on the ground, as depicted in Figure 3A. Then, the liner 10 and bag 18 are inverted together, and locking mechanism 14, 14' is released, allowing liner 10 to unroll completely and expand to fit snugly within the inside surface of bag 18. This way, the combination of liner 10 in its fully-opened position inside bag 18 and bag 18 is self supporting in the convenient, open position for receiving debris.

When bag 18 is full of debris, one simply pulls liner 10 out from the inside of bag 18, and ties up and discards bag 18. Liner 10 is conveniently releasable.

Liner 10 may be used with plastic or paper bags of many different sizes. The liner with the dimensions described on page 2, for example, will work best for conventional 39-gallon plastic bags. The liner size may be adapted as necessary or convenient to fit other sized bags.